

Horses and Mussels Policy Statement
Big South Fork National River and Recreation Area
June 2004

Existing Situation

Many mussel species have been extirpated from the Big South Fork of the Cumberland River, and others have been driven to near extinction. The cause of mussel decline in the river is poor water quality that has resulted from human activities. Contaminated mine drainage and siltation and pollution from adjacent land use practices contribute to this degraded water quality.

Another factor that negatively impacts mussels in the Big South Fork is the recreational use of horses which sometimes results in the crushing of mussels. Horses and horseback riders cross the river at two designated areas: Station Camp and Big Island¹. These areas are also inhabited by five species of federally endangered mussels. National Park Service and U.S. Fish and Wildlife Service biologists have collected direct evidence that horses sometimes crush these mussels with their hooves while crossing the river. While not believed to be a direct cause of mussel population decline, the crushing of mussels by horses was raised as a concern by the U.S. Fish and Wildlife Service. The National Park Service was asked to mitigate the conflict to avoid a "takings" under the Endangered Species Act.

To mitigate the impact of horses on mussels, the National Park Service has implemented controlled crossings at Station Camp and Big Island, as recommended by the U.S. Fish and Wildlife Service. White flags in the river mark a preferred pathway for horses and signs explain the route horses must follow and why. These controlled crossings have reduced the number of conflicts between horses and mussels, but they do not represent a long-term solution to the problem.

The National Park Service is seeking funding to study options and alternatives for reducing horse-mussel conflicts in the Big South Fork. These options could include 1) construction of horse bridges over the river, 2) hardening of crossings in the river, 3) relocation of the horse crossings to a less sensitive location, 4) removal of horse crossings from the river, and 5) relocation of mussels to a more suitable location.

The National Park Service, working closely with multiple partners including the U.S. Fish and Wildlife Service, recently approved the plan for recovery of freshwater mussels in the free-flowing reach of the Big South Fork. This plan establishes the Big South Fork of the Cumberland River (within Big South Fork NRR) as a nationally significant refugium for the maintenance and recovery of mussels that live and once existed in the area, including those that are federally listed. It is the hope of the National Park Service that these efforts will eventually lead to recovery and de-listing of endangered mussel species, which will have the net effect of reducing or eliminating the severity of impacts to mussel populations from human-related disturbances.

¹ Horses are also known to cross at other "undesigned" areas.